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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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Platon N. Mandros
BURNS, DOANE, SWECKER & MATHIS, L.L.P.
P.O. Box 1404
Alexandria, VA 22313-1404

EXAMINER

BAYAT, ALI

ART UNIT

PAPER NUMBER

2627

DATE MAILED: 11/18/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/928,373

Applicant(s)

MISHIMA, NOBUHIRO

Examiner

Ali Bayat

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on amendment filed on 8/30/05.
- 2a) ☒ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-13 and 15-20 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 15 and 16 is/are allowed.
- 6) ☒ Claim(s) 1-5, 8-14 and 17-20 is/are rejected.
- 7) ☒ Claim(s) 6 and 7 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 14 August 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Response to Arguments

1. Applicant's arguments filed 8/30/05 have been fully considered but they are not persuasive. In applicant's remarks (page 8 lines 9-10) applicant argues that Darel et al. does not use a reference color and convert the color data based on a difference from the reference color.

Examiner respectfully disagrees, Darel provides a reference color and convert the color data based on a difference from the reference color (col.3 lines 40-45).

Further in line 16 of applicant's remarks, applicant argues that the test image is based on the entire image not a reference color, and the comparison is therefore not based on a reference color as is set forth in the claims of the present invention.

Examiners respectfully disagrees the comparison is based on a reference color, see col.3 lines 40-49, note calculating the color difference ΔE between the test and reference ROIs, comparing the color difference of each ROI to a predetermined threshold whereby the ink zone is not affected is the color difference is below the threshold and processing continues with the next ink zone in the plurality of ink zones, selecting a new black value of for each ROI in the ink zone.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter

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as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-5, 8-13 and 17-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Darel et al. (U.S. 6,024,018) in view of Katayama et al. (U.S. 5,909,505).

In regard to claim 1, Darel provides for a data converting unit for converting color data that is contained in image data (col.3 lines 40-45, see RGB), into converted color data (col. 3 lines 40-45, see Lab color space) that corresponds to a difference from a reference color (col. 3 lines 40-45, see calculating the color difference ΔE between the test and reference ROIs); Darel does not provide expressly for a coding unit for performing entropy coding on converted image data in which the color data has been converted by the data converting unit. Katayama provides for a coding unit for performing entropy coding on converted image data in which the color data has been converted by the data-converting unit (Fig.11A element 218, col.11 lines 60-65). The prior art of Darel and Katayama are combinable because they are from the same field of endeavor (color conversion). At the time of the invention, it would have been obvious to a person of ordinary skill in the art to incorporate the teaching of Katayama with the system and method of Darel. Because the invention of Katayama provides for maintaining high image quality, and performing image encoding with high efficiency col.2 lines 20-23.

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With regard to claims 2 and 10, Darel provides for the image data is made up of the color data (col.3 lines 40-45, , note a^* , b^*), and image data coding device further comprises a color space converting unit for converting original image data (col.3 lines 40-45, note RGB) that is made up of a plurality of color components (col.3 lines 40-45, note RGB), into the image data (col.3 lines 40-45, not $L^*a^*b^*$).

As to claim 3. See claim 2 above. It recites similar limitations as claim 2. Hence it is similarly analyzed and rejected.

In regard to claims 4 and 11 Darel provides for a image data coding device, wherein the data converting unit includes a determining unit for determining the reference color using the color data that has yet to be converted (col.3 lines 40-45).

With regard to claims 5 and 12, Darel provides for an image data coding device, wherein the reference color is an achromatic color (col.3 lines 50-59, note CMYK).

With regard to claims 8 and 9. See claim 1 above. They recite similar limitations as claim 1. Hence they are similarly analyzed and rejected.

In regard to claim 13. See claim 1 above. It recites similar limitations as claim 1. Except for a storage medium (Fig.6 element 82). Hence it is similarly analyzed and rejected.

As to claims 17-20, Dare provides for the data converting unit converts the color data based on a difference between a single reference color, wherein the reference color is an achromatic color (col.3 lines 40-50, note processing continues with the next ink zone in the plurality of ink zones, selecting a new black value for each ROI in the ink zone.).

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A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ali Bayat whose telephone number is 571-272-7444. The examiner can normally be reached on M-F 9:00 AM-5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bhavesh Mehta can be reached on 571-272-7453. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Allowable Subject Matter

3. Claims 6-7 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Allowed Claims

4. Claims 15 and 16 are allowed.

The following is an examiner's statement of reasons for allowance: the prior art of Darel in combination with Katayama provides for limitations in claims (1,8-9 and 13), but failed to teach or suggest for a difference between a condition of the color data and a condition of data for a reference color corresponds to a difference between a color expressed by the color data and the reference color, the condition of the data for the reference color being set at maximum or minimum at least in a predetermined range including the reference color in claims 15-16.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

5. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

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Ali Bayat *AB*
Patent Examiner
Group Art Unit 2627
11/14/05

K3 Patel
KANJIBHAI PATE
PRIMARY EXAMINER